



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,539	03/31/2004	Priya Rajagopal	884.B76US1	7163
21186 7590 01/25/2010 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402				
EXAMINER KANE, CORDELLA P				
ART UNIT 2432		PAPER NUMBER		
NOTIFICATION DATE 01/25/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com
request@slwip.com

Office Action Summary

Application No.

10/815,539

Applicant(s)

RAJAGOPAL ET AL.

Examiner

CORDELIA KANE

Art Unit

2432

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 15-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 18, 2009 have been fully considered but they are not persuasive. Applicant argues that Coss fails to teach or suggest saving data for use in determining a result of a second rule executed. While Coss does state that the rule processing is bypassed (column 5, lines 42-45), the applicant is misinterpreting the use of the word bypass. Coss specifically states that after caching results for a specific packet of a given network session so that when subsequent packets from the same network session arrive at the firewall the results from the previous packet are used (column 5, lines 45-50). When a packet is received the cache is searched based on the session key which is used to determine what action is to be taken (column 6, lines 38-43, Figure 5a, step 504). The session key is equivalent to the rule since it contains the same information (Figure 3, Figure 4). Therefore the rule is executed. In addition, it could be interpreted that the cache is an extension of the rules since it is checked first and has its own condition (the session key) and then an action.
2. Applicant goes on to argue that Coss teaches away from applicant's claimed invention. As explained above Coss teaches what is claimed by applicant.
3. Applicant's arguments, see Remarks, filed November 18, 2009, with respect to 101 have been fully considered and are persuasive. The rejection of claims 9 – 13 and 15 – 17 has been withdrawn.

4. Applicant's arguments, see Remarks, filed November 18, 2009, with respect to claim objections have been fully considered and are persuasive. The objection of claim 7 has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1 – 5, 7 – 13, 15 – 22, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear where in the specification executing a second rule wherein the second rule uses the saved results to determine a result for the second rule. The specification only seems to teach executing the rule, and then executing the action. There is no reference to how the saved results are used later.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 – 5, 7 – 13, 15 – 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coss in view of Moir's US Publication 2002/0120720 A1 in view of Venkatachary, and further in view of Katz.
3. Referring to claims 1, 9, and 18, Coss discloses:
- a. Receiving state rules (column 4, lines 4-6).
 - b. Forming a set of rules including at least one condition and one action (column 4, lines 30-34), the at least one action comprises instantiation of a rule for the network flow from the set of rules (column 4, line 48) and further wherein the at least one action comprises saving the result of the at least one action for use in a later executed rule (column 5, lines 40-42).
 - c. Storing a set of rules in tabular form (column 4, lines 5-6).
 - d. Receiving a network flow including a plurality of packets (column 6, lines 29-30, Figure 5, element 501).
 - e. Applying the state rules to the plurality of packets in the network flow (column 6, lines 18-21).
 - f. Saving a result from at least a first rule of the parsed protocol state rules to create a saved result (column 5, lines 40-42).
 - g. Executing a second rule of the parsed protocol state rules, wherein the second rules uses the saved results to determine a result for the second rule (column 6, lines 38-43).
4. Coss does not explicitly disclose expressing rules in a text format and converting them into a binary format. However, Moir discloses receiving the rule file in text format

and converting it into a binary format (page 6, paragraph 72). Coss and Moir are analogous art because they are from the same field of endeavor, rules. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss and Moir before him or her, to modify the system of Coss to include the text to binary of Moir. The suggestion/motivation for doing so would have been so that the rules may be supported by the virtual machine (page 5, paragraph 58).

5. Coss in view of Moir does not explicitly disclose there being a database of filters, where a specific filter is selected. However Venkatachary discloses a database of filters or rules (column 8, lines 16-17) and selecting a filter (column 8, lines 56-57). Coss in view of Moir and Venkatachary are analogous art because they are from the same field of endeavor, filtering. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss in view of Moir and Venkatachary before him or her, to modify the method of Coss in view of Moir to include the database of filters of Venkatachary. The motivation for doing so would have been to provide traffic sensitive routing (column 2, lines 21-22).

6. Coss in view of Moir in view of Venkatachary does not explicitly disclose passing the definitions as a state machine. However, Katz discloses that state machines are critical for realizing the control and decision making logic in digital systems (page 383, 2nd paragraph). Katz and Coss in view of Moir in view of Venkatachary are analogous art because they are from the same field of endeavor, digital systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss in view of Moir in view of Venkatachary and Katz before him or her, to

modify Coss in view of Moir in view of Venkatachary to include the state machine of Katz. The motivation for doing so would have been that state machines are critical for realizing the control and decision making logic in digital systems (page 383, 2nd paragraph).

7. Referring to claims 2, 3, 10, 11, 19 and 20, Venkatachary teaches analyzing the application layer context (column 5, lines 60-62).
8. Referring to claims 4, 12, and 21, Coss teaches wherein the filter comprises a dynamic filter (column 8, lines 27-30).
9. Referring to claims 5, 13, 22, Coss teaches wherein the filter comprises a static filter (Figure 3). Static rules are defined in applicant's specification as a rule that applies to aggregate flows. In Figure 3, all flows from A to B of type FTP are Passed.
10. Referring to claim 7, Katz teaches that the state is maintained based on the state table (page 385). Coss teaches maintaining a state table of saved results (column 5, lines 38-55). Therefor Coss in view of Katz teaches maintaining an expected state utilizing the saved results.
11. Referring to claims 8, 16, and 25, Coss teaches activating a rule (column 8, lines 13-15).
12. Referring to claims 15, and 24, Coss teaches deactivating a rule (column 8, lines 36-38).
13. Referring to claim 17, Coss teaches maintaining a state table for the network flow (column 5, lines 38-55).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. K./
Examiner, Art Unit 2432

/Benjamin E Lanier/
Primary Examiner, Art Unit 2432